

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

- 2 -

- c. Narrow-gauge, coal-fired locomotives used for lumbering; produced at a rate of four to five per month.
 - d. Turbines of an unidentified model, for the USSR and Communist China; 3,000-4,500 kilowatt capacity, production rate two per month.
 - e. Fans (turbo-blowers) of 90,000 (sic - unit of measurement not known). Two to three per month produced for the USSR and Communist China.
 - f. Turbo-generators of 760 (sic - unit of measurement unknown). Sent to the USSR and Communist China. Production rate unknown. Three to four generator axles are produced monthly by one section of the combine, but it is unknown whether the axles are used within this period.
 - g. Resita-model compressors of 15-30 or 45 cubic centimeters capacity, for the USSR and Communist China. Four complete compressors of the 15-30 or the 45 cubic centimeter capacity type are produced each month.
 - h. Propeller shafts for ships; length, nine meters; production rate, one per day. Shafts are sent to Braila accompanied by a certificate indicating the results of various tests, technical characteristics, etc. The certificate is translated into Russian and forwarded from Braila to the USSR.
 - i. Overhead cranes of 175-tons for Communist China; production rate unknown.
 - j. Electric motors. Type, quantities and destination unknown.
 - k. Rolled products of many types and sizes.
 - l. Ingot and cast parts, of iron and steel with and without alloys.
 - m. Diesel engines (or Diesel-electric locomotives); recent and unverified activity.
 - n. Axles and wheels of various sizes for locomotives, railroad cars, etc.
 - o. Steel shapes.
 - p. Railroad rails.
 - q. General iron and steel products.
 - r. Coke.
 - s. Coal bricks.
4. Military production within the combine is usually called Special Problems, abbreviated "PS", and all work orders with the marking PS receive top priority in handling and are highly classified. A new department, FMD (Diesel Engine Factory), began operation in March 1959. The work orders for this department are marked LDR (Diesel-electric Locomotives) and are of second priority only to work orders marked PS. [redacted] to July 1959, this department had produced no Diesel engines nor Diesel-electric locomotives. Secrecy is maintained throughout the combine concerning the military products of the Special Problems departments, but it is common knowledge that some weapons are produced. There is also limited information available on the production of some "specialties" (the usual designation) assigned to the Special Problems departments. A description of one such "specialty" follows.

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

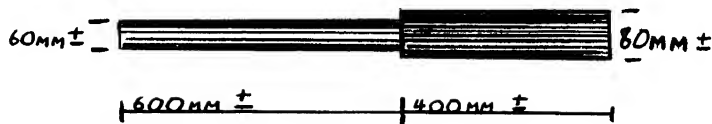
C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

- 3 -

50X1-HUM

5. The Resita plant has produced, since 1957, series of twelve "toothed rings" for the USSR. These rings are to be used in the production of "remote-controlled missiles (sic)." The production procedure was as follows: Twelve ingots of very hard, special steel, about two meters long and weighing about four tons, arrived at the combine from an unknown locality. They went to the Forging Section and were worked into twelve "rings" of the following dimensions: Outside diameter - approximately 2,400mm; inside diameter - approximately 1,800mm; thickness - approximately 200mm; width of the rim - approximately 300mm; teeth - shape uncertain (either square or pointed). From the Forging Department, these rings were sent to the Special Problems Department of the Ring Section for further finishing, and then to the Special Problems Department of the "Old Machine-building Plant" Section to have the teeth cut and for final finishing. The steel was very hard and the teeth were difficult to cut. At the completion of the work, a joint Soviet-Rumanian military commission tested the articles. The Soviets had the articles sent by rail to Braila, from there to Constanta by river transport, and finally from Constanta to the USSR by sea.
6. The production of rings was begun in 1957 and continued sporadically throughout 1958, using the special steel described above. Since the beginning of 1959, another type of ring has been produced, along with the type described above, and production has been constant with a daily average of 30 to 35 units (ten to twelve units in each eight hour shift) of either one of the two types.
7. This second type of ring is produced by the Special Problems Department of the Forgings and Heat Treatment Section. The rings are merely forged, and not further processed or treated. Specifications of these rings are as follows: Outer diameter - approximately 570mm and 400mm; inner diameter - approximately 450mm and 300mm; thickness - approximately 40 and 40mm; width of the rim - approximately 60 and 50mm. At their final destination, each of these rings is made into three separate rings, each having an approximate thickness of 13mm. Most of the finished rings are sent to the Unitatea Militara 2604 (sic) of Bacau (address U. M. 2064 (sic) - Bacau); however, a few units are sent to a Unitatea Militara of Sibiu and a Unitatea Militara of Cugir..
8. The production of cylinders for brakes for gun barrels (sic - recoil mechanisms? Bore evacuators?) began early in 1959. Cylindrical ingots of special steel are supplied by an unidentified plant and the cylinders are forged from these ingots at the Resita plant. Dimensions of the forged cylinders are shown in the following sketch:



9. The forgings from the Resita plant are further processed by the Unitatea Militara of Sibiu, which picks up the forgings in its own trucks. Orders of 100 cylinders each were received by the Resita plant and, by late July 1959, five to six orders had been filled.
10. Forging of gun barrels of an unspecified caliber was begun in 1956, suspended in 1957 and 1958, and undertaken again in 1959. Raw materials came from the Combine itself, and the forging was done in the Special Problems Department of the Special Steel Section. Production figures are not known,

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L
[redacted]- 4 -
[redacted]

but the finished products were sent to an unidentified military establishment of Orasul Stalin.

11. Since 1956, the Resita plant has received 40 to 50 pieces per month of "heavy plate" for gun shields and tank armor. These plates, of various sizes and types, are sent from the Gheorghi Dimitrov Railroad Car and Weapons Plant of Arad to Resita for special working. The plates arrive at Resita in the following approximate sizes: 1.50 by .60 m; 2 by 1.20 m; 2 by 1.30 m. The plates are curved and have thicknesses of 5, 10 and 15 mm. The plates are tempered and hardened at the Resita plant, tested for resistance (traction, torsion, etc.) and tested for resistance to penetration. The penetration test is run in the presence of Rumanian officers, who use a "test" gun with special shells. After final tests, the plates are returned to the Gheorghi Dimitrov Plant in Arad on trucks of that plant.
12. Origins of some raw materials for the Resita Combine are as follows:
 - a. Coal from Petrosani
 - b. Fuel oil and gasoline from Floesti.
 - c. Pipes from Roman.
 - d. Electric cables from the Electroputere plant of Craiova.
 - e. Scrap iron from various places in Rumania.
 - f. Brass wire from Czechoslovakia.

50X1-HUM

13. [redacted] an unidentified Antiaircraft Artillery detachment billeted in an unknown number of buildings hidden in a forest about one kilometer from the west side of the Bocsa Montana-Doman highway, and about three kilometers northwest of the Resita railroad station. The strength of the detachment is unknown, but some of the soldiers who work in the Resita Metallurgical Combine are billeted in these barracks. Guns with barrels about 2.5 meters long, mounted on wheels with tube tires and towed by trucks, have been observed in the area.
14. There is reportedly an unidentified Antiaircraft Artillery detachment housed in two buildings built in 1956 - 1957, located about 600 meters north of Resita. A road six meters wide leads to the barracks from the main street of Resita. Some soldiers who work in the Resita plant are housed in these barracks.
15. Active defensive measures for the Resita Metallurgical Combine include antiaircraft guns in packed earth positions. One such emplacement is located southeast of the Combine, between the power plant and a barracks, and two other guns are emplaced north and northwest of the Special Steel Section of the plant. The military assigned to these positions are lodged in barracks near the Combine.
16. Passive defense measures for the Combine include a firefighting force of about 30, equipped with two Praha pumping engines and other material (extension ladders, hoses, etc.). Two air raid shelters of unknown specifications are located in caves.
17. The "Industrial Guard" and the Securitate De Paza have unknown duties in the passive defense of the Combine.

C-O-N-F-I-D-E-N-T-I-A-L
[redacted]

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

- 5 -

18. Technical-administrative organization and key personnel of the Resita Metallurgical Combine are as follows:

50X1-HUM

- a. General Manager: Mihai Patriciu [redacted]
[redacted]
- b. Deputy to the General Manager: Eng Boris Klukin [redacted]
[redacted]
- c. First Assistant General Manager (administration): Virak (fmu) [redacted]
[redacted]
- d. Second Assistant General Manager (shipping): Constantinescu (fmu) [redacted]
[redacted]
- e. Third Assistant General Manager (supply): Munteanu (fmu) [redacted]
[redacted]
- f. Chief, Main Technological Office: Eng Bordan, [redacted]
[redacted]
- g. General Production Office (issues and oversees work orders): 50X1-HUM
 - 1) Chief of the "production order" branch: Mihailescu (fmu) [redacted]
[redacted]
 - 2) Chief of the "checking execution of work orders" branch: Olariu (fmu),
[redacted] 50X1-HUM
- h. Work Safety Office: Office head unknown.
- i. Special Problems Office (military production): Office chief is a lieutenant-colonel who has, as assistants, one major and five captains.
- j. Factory Guard Office: Mitrofan (fmu) [redacted]
[redacted] 50X1-HUM
- k. Archives: [redacted]
 - 1) Chief: Eng Calmuschi, [redacted]
[redacted]
 - 2) Chief of the group of productions sections (forging and heat treatment, steel, electric motors, Old Machine-building Plant): Eng Nicula Mircea [redacted]

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

- 6 -

1. Political Office:

1) Chief, Personnel Office: Solomon (fmu).

2) Chief of hiring and dismissals: Fironda (fmu).

3) Chief of discipline, efficiency and behavior in the plant: Sarbu (fmu)

This office chooses the persons to be sent to Party schools, universities, etc., on the basis of reports of their work. 50X1-HUM

4) Mobilization Office: Office head unknown. This office maintains a list of youths working in the Combine who are subject to mobilization, and informs respective districts in time to mobilize these persons.

m. Office of Production Sections: Office head unknown.

1) Hala Nova Section (Combine designation) corresponds to the New Machine-building Plant. Chief: Eng Birta

50X1-HUM

2) Deputy Section Chief, Hala Nova: Eng Chira

3) Chief of technical control office: Eng Popa

n. Locomotive Section:

1) Chief, Forging and Heat-treatment Section: Nicolae Agache

2) Chief, political office of the section: Alexandru Iacharfi

3) Chief, technological office: Ghiorghiu Bostan

4) Chief, Specifications Office: Vasile Rata, ardent Communist.

5) Chief, accounting office: Ion Tress

6) Chief, Office of Technical Assistants: Ioan Presnescu, technician,

7) Chief, heat-treatment office: Gavrilă Chistea

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

- 7 -

- 8) Chief technician, heat-treatment office: Francisc Bucorovic,
[redacted]
- 9) Chief, Shipping Office: Mrs Zoe Schorning [redacted] 50X1-HUM
- 10) Chief, Control and Test Office: Alexandru Sirbu. 50X1-HUM
- o. Electric Motor Section: Chief, Eng Popovica, [redacted]
[redacted]
- p. "Old Machine-building Plant" Section: Chief, Eng Dascalache [redacted]
[redacted]
- 1) Deputy Section Chief: Eng Costea [redacted]
- 2) Chief, Shipping Office: Ardeleanu (fnu).
- q. Rollingmill Section: Chief, Eng Eremia, [redacted] Deputy Section
Chief: Eng Liuba [redacted] 50X1-HUM
- r. Machinetool Section: Chief, Eng Ionescu [redacted]
[redacted]
- s. Ring Section.
- t. Hearths and Steel Section.
- u. FMD (Diesel engine plant) Section.
- v. Model Section.
- w. Coal-brick Section.
- x. Steel Shapes Section.
- y. Coking Plant Section.
- z. Special Steels (MACIUR Special Steel) Section.
- aa. CFU (Combine railroad) Section. 50X1-HUM
- bb. Welding Section: Chief: Cabal (fmu).
- cc. Physics Laboratory: Chief: Eng Tiberiu Balatescu, [redacted]
- dd. Strength of Materials Testing and Chemical Analyses Laboratory.
- ee. Metallographical Laboratory.
- ff. Technical Control Office.
19. Extent of planned and new construction within the Resida Combine:
- a. Planned: Demolition of the building now housing the "Old Machine-building Plant" Section and the construction of a larger and more modern structure on the same site. Production will remain the same. Start of construction was set for the end of August or the first of September 1959.

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

- 8 -

- b. Under construction: The office wing of the new building to house the FMD Production Section was nearly completed by July 1959. The shop for the FMD Section was completed at the end of 1958.
 - c. Constructed: A new shop to house the Machinetool Section was constructed in 1958. A complex of four buildings was built in 1957 to house the MACIUR Special Steel Mill, so named because it is in the Maciur suburb of Resita.
 - d. Completed and operating: A new thermal-electric power plant, called "7 November", was completed in late 1956 or early 1957, to supply current to the Special Steel Section and, to a lesser degree, to the Combine itself. A tunnel, the exact use for which is unknown, was completed in December 1958.
20. Production plans within the Resita plant go frequently unfulfilled because they are too high. The workers are poorly-paid, undernourished and indifferent, and without incentive to earn more than their minimum base pay. The management has cut salaries to discipline the workers, but this has resulted in further discontent. As a result, absenteeism among the workers has been high, and such action brings intervention by the police and the arrest of the ringleaders.
 21. The latest such event occurred in April 1959, in a department of the Locomotive Section. About 1,000 workers received pay cuts for not fulfilling their norms. They went on a sit-down strike beside their machines. They resumed working only after the management formally promised to pay the remainder of their salaries. On that afternoon, however, the Securitatea arrested seven or eight workers presumed to have instigated the protest demonstration, and as of July 1959, their whereabouts remained unknown.
 22. The plant at Resita for the destructive distillation of wood is located 500 - 600 meters east of the Combine, adjacent to the Barsava River. It is an old complex with an undetermined number of buildings irregularly placed around the area. A narrow-gauge railroad, running through the Combine, connects the distillery with the Resita railroad station. The plant produces ethylic alcohol (sic), denatured alcohol, and other unidentified chemical products.
 23. large sketch with a detailed legend showing the layout of the Resita Metallurgical Combine, Resita.

50X1-HUM

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

LEGEND

(Numbers correspond with those on sketch)

- 1, 2, 3, 4. Entrances (numbered, respectively 1, 15, 7, and 8 by the Combine.)
5. Motor vehicle entrance.
6. Freight and railroad siding entrance.
7. Offices; 4-story building, approximately 65 by 20 meters:
 - 1st floor: guardhouse of the factory guards; plant railroad office; warehouse for new plant equipment; worker check-point with time clock for Entrance #1.
 - 2nd floor: Work and pay office; pay desk.
 - 3rd floor: Special Problems (military production) Office; Combine court (judges thefts, sabotage, fights, etc.).
 - 4th floor: Combine union; Combine surveillance; planning office.
8. Repair shop for Combine rolling stock (CFU: Railroad Shop); structure about 80 by 50 meters - approximately 200 workers; repairs and services the plant locomotives and damaged rolling stock used to carry material within the Combine.
9. General accounting offices; 3-story building, about 100 by 30 meters.
10. Offices; 2-story building about 30 by 15 meters; houses: Personnel (cadre) office, mobilization office, time clock office, shipping office, weapon and clothing warehouse of the factory guards.
11. Fire station; structure about 20 by 20 meters; 30 firemen; Praha pumping engines, extension ladders; miscellaneous firefighting equipment.
12. Physics laboratory; 2-story structure, about 30 by 30 meters; equipped with modern machinery to test materials, installed 2-3 years ago; head of laboratory: Eng Tiberio Balateanu; four engineers, 25 laboratory assistants, 19 laborers.
- 12a. Machinetool Section; shop about 90 by 50 meters, built 1958; equipped with all new machinetools, partly produced by the Iosef Ranger Plant of Oradea and partly supplied by East Germany; about 50 machines. This Section is responsible for maintaining all Combine machinery. Section Chief: Eng Ionescu; about 1,000 civilian workers and 15 military (all lathe operators but their duties are not known).
13. Rollingmill Section; shop about 150 by 100 meters. Section Chief: Eng Eremia; about 40 engineers and 2,000 workers. Known products:
 - a. Iron rods from 8 to 200mm in diameter.
 - b. Rolled squares from 50 by 50mm to 450 by 450mm.
 - c. Rails for standard-gauge and narrow-gauge railroads.
 - d. Sheets from 5 to 100mm in thickness.
 - e. U-beams, L-beams, double T-beams of various dimensions.
14. Ring Section; shop about 80 by 50 meters; five engineers, including the Section Chief, and about 400 workers. Produces tires for locomotives and railroad cars, railroad car axles. There is also the Special Problems department which produced 12 "toothed rings."

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

- 2 -

15. Lathe department; under the "Machinetool Section"; shop about 70 by 10 meters; about 300 workers; produces rollers for the Combine rollingmills.
16. Worker check-point with time clock for Entrance #3 (No 7 Entrance in Combine designation.)
17. Worker check-point with time clock for Entrance #4 (No 8 Entrance in Combine designation.)
18. Hala Nova (New Machine-building Plant) Section; shop about 100 by 100 meters; began operation 1952 - 1953; Section Chief: Eng Birta; up to end 1958 and the beginning of 1959, made only locomotive parts; began producing in 1959 turbines of 3,000 to 4,500 kw; blowers; electric generators. In 1958, Special Problems department worked the 12 "toothed rings."
19. Telephone exchange and telephone repair shops; built 1952 - 1953 along with the Hala Nova; structure about 50 by 50 meters.
20. Model Section; structure about 100 by 100 meters; carpenter shop for preparing wooden models; shop for wooden model apprentices; apprentice mechanics shop.
21. Coal-brick Section; structure about 40 by 40 meters; produces bricks of pressed coal needed by the Combine; loading and unloading the railroad cars is done by conveyor belts.
22. Open-air metal plate storage; area about 80 by 20 meters.
23. Locomotive-building section; structure about 80 by 50 meters; standard and Russian-gauge locomotives; locomotives for the Hunedoara Iron and Steel Combine; lumbering locomotives; has a standard and a Russian-gauge rail connection.
24. Forging and heat-treatment section; structure 70 by 50 meters; old building with antiquated equipment; Section Chief: Eng Nicolae Agache; about 800 workers; 14 steam-operated hammers, 500-7,000 kg; 9 heating furnaces (electric and gas-fired, gas from the coking plant). There is a Special Problems department which produces rings, of unspecified use, of special steel; cylinders for brakes for gun barrels, and gun barrels. This department heat-treats and then "tests" plates for tank armor (?) and gun shields.
25. Old Machine-building Plant Section; construction about 100 by 50 meters; produces Resita-type compressors of 15, 30, 45 cmc (sic); propeller shafts for ships, nine meters long; 175-ton overhead cranes.
26. Electric motors section; building about 100 by 50 meters,
27. Steel shapes section; construction about 15 by 15 meters; Section Chief: Eng Fratele; produces steel rods of 10-150mm in diameter and hexagonal bars of various sizes.
28. General management; U-shaped, 4-story building about 50 by 10 by 50 meters; technical and administrative management of the Combine.
29. Suspension bridge about 10 meters above the ground, one meter wide, metal construction, connecting General Management building (29) with the General Accounting Offices (10).
30. FMD Section (Diesel engine plant); structure about 150 by 100 meters; construction started in the spring of 1958 and was completed in the same year. The east wing, housing the offices, has to be still completed; March 1959, machinery installed and plant began operation; products of this section are unknown. To the end of July 1959, no production was seen leaving this section.

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

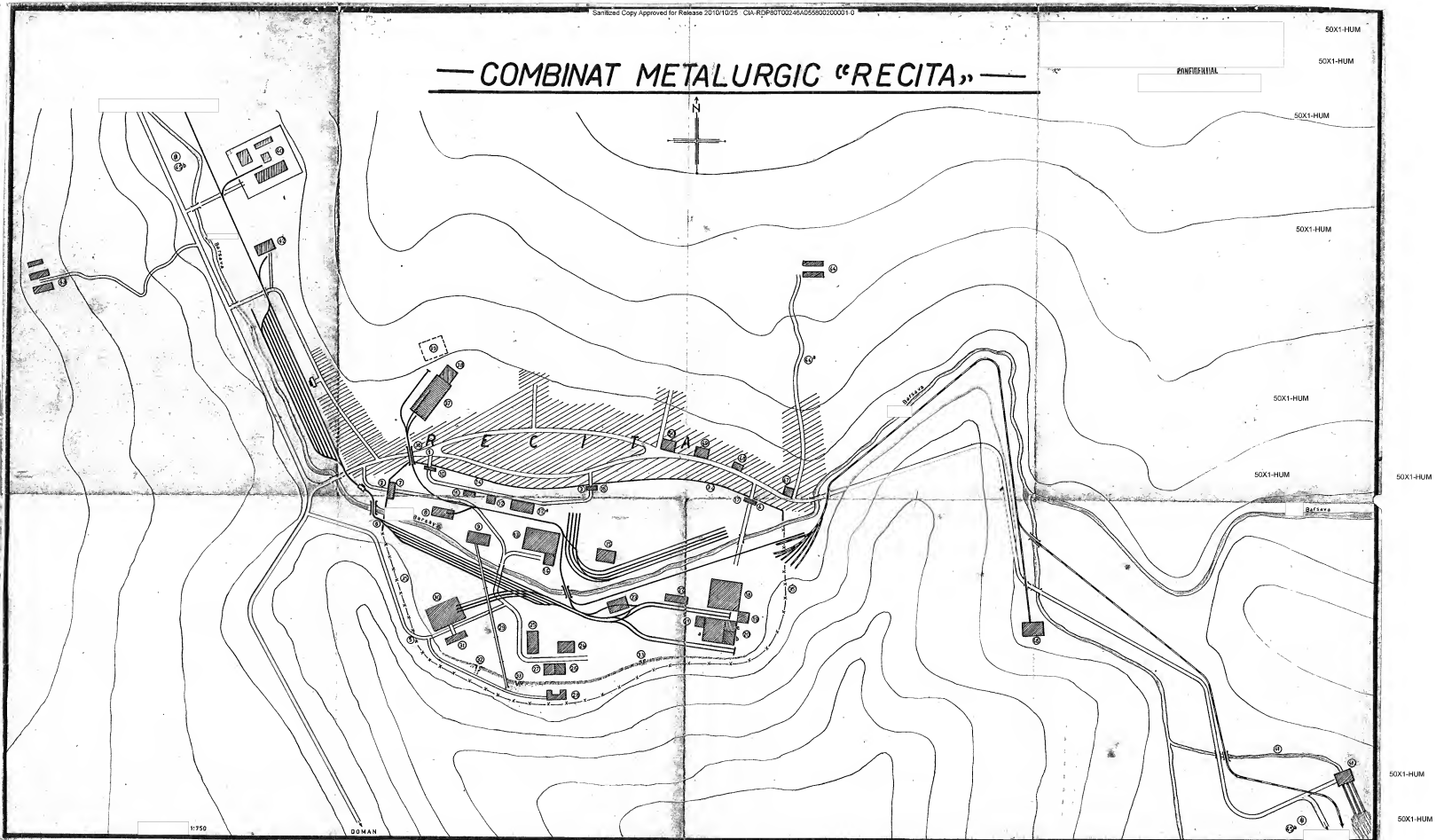
- 3 -

31. Electric and autogenous welding section; structure 100 by 50 meters; formerly the department making locomotive and railroad car wheels. In June - July 1959, all machinery of the wheel department was transferred to an unspecified plant in Braila.
32. Entrance to a tunnel driven into a hill lying south of the Combine. The opening to the tunnel is in the center of a thick concrete wall; the door is iron; about 2 by 2 meters and about 5 cm thick. The wall and door are covered with posters suggesting work safety and are not noticeable even when passing nearby. The construction of the tunnel was begun in 1955 and completed December 1958. There is a narrow-gauge railroad running into it, but the features and size, etc., are unknown. It is rumored that there is another exit; that a department for war production is installed there.
33. Entrances to old air raid shelters; doors are of metal, about one by two meters.
34. Wall about four meters high, marking the north side of the Combine.
35. Fence about two meters high encloses the other sides.
36. Metal overpass connecting the Combine with the hearths and steel mill; about 4 - 5 meters above the street.
37. Hearths and steel mill section; structure about 200 by 150 meters; built long ago; surrounded by smoke stacks; equipped with 3-4 vertical SIEMENS-MARTIN hearths with gas burners (gas supplied by the coking plant); electrically rotated; produces iron ingots and steel ingots (with or without alloys) and large pieces.
38. Coking section; structure partly covered.
40. Special steels (MACIUR Special Steel Mill) section; located about two kilometers north of the Resita railroad station. Complex with four structures of various sizes and types; construction begun middle of 1951 and completed fall of 1957. Section contains a Special Problems department. Mill produces special steels in ingots and various pieces used in the Combine.
39. Gas storage tank zone (gas from the coking section).
41. Combine's hydroelectric power plant; 3-4 kilometers southeast of the Combine; supplied by three penstocks with water from an artificial lake at Avina. The penstocks are metal pipes, about 60 cm in diameter and about 300 meters long. The descend sharply along the side of a hill above the power house. No information on turbines, power potential, etc. Run-off water goes into the Barsava River by an artificial canal (41a).
42. 7 November thermoelectric power plant; newly built. Most of its power goes to the Special Steels Section (40) and a lesser amount to the Combine itself. It is a single building of "large" dimensions, flanked by a brick stack about 40 meters high.
43. Antiaircraft unit barracks.
44. Antiaircraft unit barracks. (44a. - access road to barracks).
45. (a and b) Antiaircraft gun emplacements.
46. Chemical distillery.
47. Firehouse.
48. Securitatea headquarters.

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

— COMBINAT METALURGIC "RECITA," —



50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM